CLAIMS:

We claim:

1.   An intelligent electronic mail (e-mail) gateway comprising:

a message store configured to store received messages forwarded by senders over a network to a mail server coupled to the e-mail gateway and associated with corresponding intended recipients; and,

a notification manager coupled both to the gateway and said message store, said manager having a configuration for notifying selected ones of said senders when delivery to said intended recipients has become impaired.

2.   The gateway of claim 1, further comprising message generation logic programmed to format notifications for said senders which indicates at least one of an estimated down time of said mail server; an estimated time when said delivery will no longer be impaired; and an alternate e-mail address with which said selected ones of said senders can retransmit said messages to corresponding intended recipients.

3.   The gateway of claim 1, wherein said selected ones of said senders comprises at least one of senders who have been determined to be priority senders and senders who have labeled their respective messages urgent.

4.   The gateway of claim 1, wherein said message store is a queue.

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5.   A method for intelligently handing an impairment to the delivery of e-mail messages to intended recipients in a mail delivery system, the method comprising the steps of:

storing received e-mail messages prior to forwarding said messages to inboxes of respective mail servers;

detecting an impairment to delivering said messages to said inboxes;

identifying senders for selected ones of said messages; and,

forwarding a notification of said impairment to said identified senders.

6.   The method of claim 5, wherein said storing step comprises the step of queuing received e-mail messages prior to forwarding said messages to inboxes of respective mail servers.

7.   The method of claim 5, wherein said detecting step comprises the step of consulting a data store of state information for selected ones of said respective mail servers to recall an already identified impairment.

8.   The method of claim 5, wherein said detecting step comprises the step of probing selected ones of said respective mail servers to detect said impairment.

9.   The method of claim 5, wherein said detecting step comprises the steps of:

attempting to transmit said messages; and,

concluding the existence of an impaired state when said attempt fails.

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10. The method of claim 5, wherein said step of identifying comprises the step of identifying only priority senders.

11. The method of claim 5, wherein said step of identifying comprises the step of identifying only senders of urgent messages.

12. The method of claim 5, wherein said forwarding step comprises the steps of:

formatting a detailed notification describing a nature of said impairment; and,

forwarding said detailed notification to said identified senders.

13. The method of claim 5, wherein said forwarding step comprises the steps of:

formatting a notification comprising both a statement of said impairment and an estimate of when normal mail delivery service can resume; and,

forwarding said detailed notification to said identified senders.

14. The method of claim 5, wherein said forwarding step comprises the steps of:

for each of said identified senders, formatting a notification comprising both a statement of said impairment and an alternate e-mail address for use in retransmitting a corresponding one of said messages; and,

forwarding said detailed notification to said identified senders.

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15. A machine readable storage having stored thereon a computer program for intelligently handing an impairment to the delivery of e-mail messages to intended recipients in a mail delivery system, the computer program comprising a routine set of instructions for causing the machine to perform the steps of:

storing received e-mail messages prior to forwarding said messages to inboxes of respective mail servers;

detecting an impairment to delivering said messages to said inboxes;

identifying senders for selected ones of said messages; and,

forwarding a notification of said impairment to said identified senders.

16. The machine readable storage of claim 15, wherein said storing step comprises the step of queuing received e-mail messages prior to forwarding said messages to inboxes of respective mail servers.

17. The machine readable storage of claim 15, wherein said detecting step comprises the step of consulting a data store of state information for selected ones of said respective mail servers to recall an already identified impairment.

18. The machine readable storage of claim 15, wherein said detecting step comprises the step of probing selected ones of said respective mail servers to detect said impairment.

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19.   The machine readable storage of claim 15, wherein said detecting step comprises the steps of: attempting to transmit said messages; and,

concluding the existence of an impaired state when said attempt fails.

20.   The machine readable storage of claim 15, wherein said step of identifying comprises the step of identifying only priority senders.

21.   The machine readable storage of claim 15, wherein said step of identifying comprises the step of identifying only senders of urgent messages.

22.   The machine readable storage of claim 15, wherein said forwarding step comprises the steps of:

formatting a detailed notification describing a nature of said impairment; and,

forwarding said detailed notification to said identified senders.

23.   The machine readable storage of claim 15, wherein said forwarding step comprises the steps of:

formatting a notification comprising both a statement of said impairment and an estimate of when normal mail delivery service can resume; and,

forwarding said detailed notification to said identified senders.

24.   The machine readable storage of claim 15, wherein said forwarding step comprises the steps of:

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for each of said identified senders, formatting a notification comprising both a statement of said impairment and an alternate e-mail address for use in retransmitting a corresponding one of said messages; and,

forwarding said detailed notification to said identified senders.

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